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ABSTRACT

There are many barriers that present real problems in the process of documenting the development of a course, but if the system is kept simple and straightforward, documentation should give the professional information which will result in a better course. Documentation techniques used during the development of a course on the cultural history of the Great Plains at the University of Mid-America included progress reports, inter-team memos, minutes of team meetings, written critiques of course materials, collection of papers, and a questionnaire answered by all team members. Other documentation techniques that could be used include: (1) a journal kept by each team member in which the day's activities are noted, (2) an outside observer who records the activities of the team, (3) interviews, (4) a detailed calendar to record day to day activities, and (5) a record of budgeting decisions. (Author/DS)

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DOCUMENTATION AND THE COURSE DEVELOPMENT PROCESS
(or Chronicles of Tragedy, Despair and Occasional Ecstasy)

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DOCUMENTATION AND THE COURSE DEVELOPMENT PROCESS
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Even the name of this address sounds imposing. It is little wonder that the documentation of the course development process is rarely--if at all--accomplished. I should qualify this remark because I cannot speak for curriculum development projects throughout the country. My experience is with the University of Mid-America (UMA), a research and development agency in Lincoln, Nebraska, that develops multimedia, open learning course materials. UMA either has or is developing courses in Accounting I, Accounting II, Introductory Psychology, Metrics System, Japanese Studies, Cultural History of the Great Plains, the World Food Crisis and "Anyone for Tennyson?". Courses are developed by course teams composed of a designer, content expert, producer and evaluator. Script writers, editors and content researchers are also frequently involved with the course team.

In this context, then, it has been my experience that the development process is rarely (if ever) recorded or documented beyond the keeping of old correspondence or memo files. And, really why should it be? The barriers to such a documentation effort are considerable. First, there is genuine uncertainty about what documentation will tell us. Why do it? How will it improve the course? By the time the documentation is complete, the team will be considering new problems and moving on to other stages of development. If we are documenting for the benefit of others, will our problems necessarily be theirs? Is our experience generalizable? The pay-off of the documentation effort, then, seems problematic.

A second barrier to documentation is time. Even if the people developing the course were receptive to the idea, the amount of time it takes would be

prohibitive. During the crunch of development, print and production deadlines are omnipresent. It usually requires a total commitment to meet these deadlines and get the product out on time. Anything that detracts from this all encompassing task is simply ignored or resented. Documentation also takes financial and personal resources in addition to people's time; and resources, like time, cannot be spared during the development crunch.

A third barrier relates to a general confusion about what to document (even if conditions one and two above were ameliorated). A favorite phrase of developers and evaluators alike is "key decision points" and, therefore, it makes eminent sense to document the key points. But I would like to know what a key decision point is. In most cases, the major decisions that are made during the development process are so intertwined with fiber and fabric of the dynamic that they are virtually impossible to isolate at the time they are made. Many decisions are not based on a linear, step-by-step process; they instead are based on what Walker (1970) has called a platform: a continually evolving blend of conceptions, theories, aims, images and procedures. Each component of the platform influences decisions at different times and to various degrees.

The development process does include explicit decisions which are made after consideration of alternatives and consequences. These types of decisions certainly obtain. But an equally powerful set of decisions are implicit and not publicly articulated; these decisions are understandably more difficult to isolate and portray. People who have participated in development projects need little convincing that these complexities exist, and because they exist, it is difficult to determine what to document. It seems ludicious and inefficient to counsel that one should document everything but then it is overly naive to think that only key decision points should be recorded.

A fourth barrier to documentation is the issue of the objectivity of the people involved in the development project. Can they separate their feeling for what should have happened with what did occur? Can they objectively reconstruct (if this is the method used) or construct the deliberations of the course team? How are conflicting perceptions of the same event handled? The countervailing proposition must also be weighed: Can an outsider--a presumably unbiased observer--accurately portray what transpired during the development process.

These four barriers plus others seem to have been quite effective because, as previously mentioned, there are few development projects, at least at UMA, that have been documented. These barriers present real problems and any attempt to engage in documentation must address them. But there are some very real and important reasons for engaging in the documentation effort. Before discussing these reasons and examples of documentation used for a course on the Cultural History of the Great Plains, we should devote a few words to the meaning of the word documentation.

By documentation, we simply mean the recording of information. This can take several forms (e.g., typed or handwritten documents, tape recordings, course proposals, and course products) and it can, of course, cover a wide variety of subject matter. One of the difficulties with the use of the word documentation is that it conjures up elaborate, almost clandestine, systems of recording information. To the contrary, documentation should in most cases be simple, straightforward and public. Memos and minutes of team meetings, for example, are very important forms of documentation. Budgets and timelines are other types of documentation. Documentation, then, at least as used in this paper is recorded information. Examples of different types of documentation will be given in a later section of this paper.

At UMA, there are some very definite reasons why more systematic and comprehensive course documentation efforts should be undertaken. These reasons can be classified under the following headings: planning, organizational management, team management, course product, professional understanding and psychological evidence. Each of these reasons will be briefly discussed.

Three fundamental decisions that confront each course at UMA in the planning stage are questions of 1) budget, 2) timeline and 3) staffing. We need to know how much money, how long and how many people to involve in a given course. Without estimates that are firmly grounded in experience, we will (and have) generate unrealistic expectations which can only lead to disappointment and probably inferior courses. Too frequently, our planning is separated from reality. One hopeful sign occurred recently when a television producer was presented with a budget. Instead of acquiesing and attempting to produce 15 television programs which could not benefit from the proper amount of attention and money, he firmly stated that for this money and for the designated purpose of the television, he could produce five television programs. His arguments were convincing and the course will contain five programs.

Course documentation can assist in the planning of new courses by recording costs, time, and staff for different instructional approaches, formats and products. For example, it would be useful to know that a documentary program takes twice as long as a studio produced program or what extra time and resources are needed if a course is saddled with the creation of a new textbook. Documentation might also lead to the conclusion that certain courses need more front-end design time than others or that others require fewer content researchers.

Timelines are also a major concern. How long should it take to develop a 15-week course which involves a text, study guide, newspaper articles, television programs and audio tapes? How long can a course team be expected to creatively produce materials? What toll does a protracted development period have on the

team members? How many team members should be involved to produce a course in a given time period? We simply don't know the answers to questions like these, but it is evident that they require an answer.

Organizational management (by this I mean the coordination and management of different course teams working on independent projects) can be facilitated by course documentation, especially in a decentralized organization such as UMA. Course teams at UMA operate relatively independent of each other and somewhat autonomuous from the academic vice president and director of course development. The organizational hierarchy is clear but the exigencies dictate that academic vice president and director of course development cannot be intimately involved in the intricacies of each course team. They are, however, ultimately responsible for the course and they, therefore, have certain expectations and requirements for quality.

Documentation can serve the important function of keeping them apprised during the development period. By keeping the key decision makers continuously or at least periodically apprised of the team's activities, the likelihood of a severly negative summative judgment on the finished product is reduced. They, after all, should have been able to correct the project during its early developmental phases.

The management of the team can also be influenced by documentation efforts. The team, even if it is a scaled down or an altered version of UMA course teams, is an incredible complex organism. The main ingredients of the team approach are the following:

1. Several people with different personalities and value orientations
2. Representing different areas of professional expertise
3. Brought together for intense working sessions
4. Over long periods of time

5. Under pressures of deadlines and budget.

Many times the bonds that bind the team members together are not strong, and the team ceases to act collectively. Accounts of fist fights between team members developing materials for the Open University have been recorded (a type of documentation thoroughly consistent with the intent of this paper). The point is that team management involves considerable interpersonal as well as professional skills (if indeed such a dichotomy exists), and it is important to be aware of the type of difficulties that either have or could arise. Documentation can help in this function by hopefully reducing misunderstanding about what was said or intended by team members. Even among people of good intentions it is necessary to have statements in writing. It is too easy to forget or misinterpret verbal commnets.

Documentation also facilitates the meeting of deadlines and the establishment of agreed upon procedures and criteria. If management practices such as reviewing of draft materials and the documentation of these reviews are not instituted to some degree, then, the team may be overwhelmed as the deadlines approach. It is also important to record key statements such as the course audience, goals, objectives and the outlines for each particular essay or chapter. These documents start to form the concrete platform on which the course is built. If a chapter is received which is not quite consistent with an outline that was previously agreed to by the designer and the content expert, then it is a much easier matter to base criticism on the original document rather than a more nebulous criteria which may not be shared by other team members.

It is also presumed that because documentation should lead to better planning, institutional management and course management, it will also result in a <u>better course</u>. Unfortunately, there are too many control groups and too

few treatment groups, so we are unsure about the answer. In most cases, documentation should give the professional information which will result in a better course. But documentation, by itself, is no assurance of quality. It is only a method or procedure, and it will lead to improvements if it is used wisely and judiciously. It should also be emphasized that documentation has a habit of piling up and unless it can be analyzed and interpreted, it will likely not be of use to anyone.

Perhaps it is not so much a question of documentation leading to a better course as it is that the process of documentation may generate a more systematic approach (not systems approach) to course development. Perhaps the approach more than the actual information gained might insure a higher quality course. For this reason, if a documentation procedure is forced on a team, it will probably not have the same impact as if the team accepts and supports it.

Documentation may also make contributions to the field of instructional design. As a field of inquiry, instructional design is in its infancy. It is a field where practice is ahead of research. On of the most pressing needs that it, as a field of inquiry, faces is knowing more about what actually transpires in curriculum development. Walker (1970), among others, has recognized that "Despite a decade and a half of unprecedented activity in curriculum development, we know very little about the methods of operation of curriculum development groups." Documentation of this process could then benefit the profession. It is not too unreasonable to expect that if more complete and comprehensive documents were available, more powerful models or partial theories might be generated that would be generally useful. Description is a necessary initial step in theory building and at present our description--that is our documentation--is inadequate.

A corollary to this statement is that because curriculum projects are being developed throughout the country, the developers are frequently unaware of

projects that might be dealing with similar problems or undergoing many of the same experiences. If documentation of such efforts were available, it might facilitate communication between members of different projects or at least offer an example of how a problem or issue was handled in one somewhat parallel situation. These pragmatic guidelines could also serve to better prepare designers and team members for what their job actually entails. From a personal perspective, I would have greatly benefited from such a glimpse. I probably wouldn't have taken the job, but I would have enjoyed the melodrama.

And, finally, documentation can serve another purpose. It serves as absolutely vital information for the psychologists working with designers and other course team members. As psychological evidence, the documents can allow all team members to be treated by the same or different shrinks while the course is being developed. Not one single deadline will be missed. The documents can be sent via mail or interoffice memo to the psychologist--therapy by correspondence is very efficient and cost effective, so long as the mail rates don't go up again. An alternative use of documents (which serve as psychological evidence) is to wait until the completion of the project and bury the accounts in a time capsule. It would be very interesting to determine if the people in 2076 could figure out what we have been doing.

These, then, are reasons for engaging in the course documentation process. If properly conducted, documentation can lead to better planning, organizational management, team management, course products, professional knowledge and, last but least, psychological evidence. These seem to be compelling reasons for engaging in documentation but the previously described barriers to documentation are also quite formidable. Let us briefly discuss these barriers in terms of the reasons for documentation that have just been delineated. Following this treatment, the type of documents that we generated on the Great Plains course

will be examined and then other possible documentation techniques will be described.

The first barrier relates to uncertainty about why documentation should be undertaken. The reasons for engaging in documentation previously discussed primarily address this question; and although it cannot be definitely proven, we contend that planning, management (both institutional and team), results and generalizable knowledge will benefit from an effective documentation program. These benefits are stated at a level of generality that may be uncomfortable to the practitioner and to especially dubious course team member. They will probably remain dubious, and well they should, until more specific, actual benefits are realized.

The second barrier is time. There is no doubt that documentation does take time and, in some cases, it takes more time than is available. Time can often be used as an excuse to not engage in documentation. But some methods take very little extra time and the time barrier can, at least to some extent, be alleviated.

The third barrier is uncertainty about what to document. There are guidelines that can be used to at least partially address this issue. Case studies of curriculum development are contained in a recent book entitled Strategies for Curriculum Development (Schaffarzick and Hampson, 1975); and in a final chapter Schaffarzick identifies procedures and characteristics which are common to each development effort. Documentation could be focused around these common characteristics which are

1) Determination of need.

2) Theoretical foundations or the basis on which the curriculum is built; these foundations may include views about learning, the subject, the learners, society in general and other topics which may impact on development (this characteristic is analagous to Walker's notion of a platform).

3) Goals and objectives.

4) Attention to development psychology and learning research.

5) Group collaboration.

6) Early dissemination planning (e.g., marketing, promotion, publicity).

Other sets of characteristics or models can be used to serve as more concrete guidelines for documentation. There are, however, a whole set of decision points which cannot be neatly categorized into Schaffarzick's characteristics or isolated from the process as the systems models would have one believe. The documentation of the implicit design and the dynamic process of development is more problematic, but nonetheless important. Running accounts of the team meetings or communications are useful in this case. Several suggestions for this type of documentation will be given in the section on documentation techniques.

The fourth barrier to documentation is objectivity and a documentation program can greatly alleviate this limitation. If it's down in writing, it is a permanent record. A documentation program does not completely circumvent the question of objectivity because records, if not properly reviewed, may not accurately portray the situation; but there are methods and techniques, if judiciously used, that can greatly increase the objectivity of the information reported.

Documentation on the Great Plains Course

The Great Plains course undertook several documentation activities. Although these activities were not extensive, they did supply information that was later useful. Perhaps these techniques can serve as examples for other agencies wishing to document their process.

1. Inter-Team Memos. Although not a particularly innovative technique of documentation, memos can serve a worthwhile and useful purpose. They are

especially valuable in terms of documenting communication between members of the course team, and they serve as a potentially useful source for reconstructing the major decisions that were made. The memos, perhaps more than any other source, are evidence of the platform and shared set of understandings held by the team. By encouraging the use of memos, team members have the chance to refine ideas casually offered in discussion. Memos also have the advantage of creating a permanent record of the team deliberations.

2. Progress Reports. As deadlines are established, various team members are asked to submit progress reports. These progress reports are often offered verbally and then later recorded in a memorandum. These reports often detail, although in a somewhat sketchy way, what progress has been made and what decisions and/or arrangements must yet be made.

3. Minutes of Team Meetings. Full scale team meetings are generally held once every two weeks. At these meetings, minutes are taken and eventually typed up. The minutes, like the memos, serve as an ongoing chronicle of the team's activities. Major decision points often come out in these meetings, but so also do relatively minor matters that are more peripheral.

4. Internal Critiques. As drafts of course materials are produced, each team member submits a written critique of the draft version. These critiques serve as a record of disagreements and different perspectives on materials being developed by the team. These critiques also raise key decision points within the context of a particular essay or program. It is often difficult for non-designers to speak about goals and media selection in the abstract and these critiques often bring up key decision points in a more concrete way.

5. Collection of Papers. At present, I am trying to collect the papers and memoranda that I wrote while serving as evaluator on the Great Plains team. By engaging in this process, I have come, I think, to a better understanding

of my role and the role of evaluation in course development. This collection also points out to me and the people who read it the effectiveness and utility of different ways of presenting and reporting data.

6. White Paper. After the last phase of the Great Plains course, a questionnaire was handed out to all team members. This questionnaire sought to have the team examine its own process and suggest recommendations for improvement. The instrument was open-ended and no holds were bared. A day long retreat was also held and some of the concerns expressed in this retreat were recorded in a white paper. The white paper was then reviewed by the team to insure that it accurately portrayed the viewpoints held by various team members. This "white paper" or sort of post mortem of a development project was useful to the team and it served as a basis for several of our procedures in the ensuing phase of the course.

7. Graffitti. A critical but often overlooked source of documentation for the Great Plains team was graffitti--found in restrooms, the coffeeshop, individual offices, and under the large conference table. These data can be gathered unobtrusively and even late at night. The janitor is also a prime source for documentation efforts. The wastebasket level (variable WB level) has been found to be a critical in determining the frustration level of team members. It is true that graffitti data may be confounded by other interpretative comments but this only presents a challenge to the course team evaluator. At present, one evaluator is attempting to determine if Hugh Heffner really did work on a UMA course team.

Although none of these techniques are elaborate, they are a form of documentation that has been useful. To these techniques, we could add several others that are feasible in many situations.

Other Documentation Techniques

1. Personal Journal Accounts. Each team member could keep a brief journal which describes the day's activities and the main problems encountered. We had several false starts with this technique, but we were not able to keep it up. There has to be some pressure or incentive to take the time at the end of the day to jot down a few lines or talk into a tape. This technique seems valuable, but we just couldn't maintain enough continuity to enter these accounts on a day-to-day basis.

2. Observation of Team Meetings and Development Activities. An outside observer could, at several stages during the development process, observe and record the activities of the team. This technique does require additional staff and expense, but it offers the opportunity to offer a fresh look at the course team and curriculum project. Graduate students trained in participant observation or anthropological field methods could be used as observers if this technique is appropriate.

3. Periodic Interviews and Questionnaires. It would be possible, at several stages during the development process, to question or interview team members. On the Great Plains course, we waited until the end of one development phase before undertaking interviews and team questions. The evaluator or course researcher could do this activity and report its results back to the course team.

4. Detailed Calendar and Sequence of Events. One team member, preferably the course developer, would keep track and record the day-to-day activities of team members. Hopefully, this could be accomplished unobtrusively, but it would be valuable to have a daily account of the activities engaged in by the team members. It would also be possible to make arrangements with team members to annotate their calendar so that this record can be maintained. The main purpose of this type of documentation is to begin to get a sense for the actual as opposed to intended time requirements for development.

5. External Summative Account of the Course Development Process. An outside evaluator could be called in to thoroughly debrief each course team member and file a report which reconstructs the process and elucidates the main problems faced by the course team. This technique has obvious strengths and weaknesses, but it is likely to be more credible than an evaluation completed by a team member.

6. Annotated Budget. As budgetary decisions are made and money expended, a record can be kept of why, when and where the monies were used. This record can then be reconstructed to trace the fiscal and time resources used in the project. The Great Plains team needs to use this documentation source more fully because of UMA's needs to plan more realistically in terms of budget and timelines.

These, then, are several techniques for the documentation of the course development process. They do not yet add up to a methodology of course documentation because our procedure and even purposes are not yet that well developed. These techniques are a beginning, and as they are used we can probably become more sophisticated about the relative benefits of different documentation techniques. It is also true that certain techniques more effectively deal with the barriers to documentation than do others and as the documentation repetorie grows, the barriers can be more easily circumvented.

This paper has discussed the reasons for engaging in the documentation process and barriers that may affect the quality of documentation techniques that either have been or could be used in the UMA context. It has also outlined some documentation techniques that could be used. As a final thought, it should be stressed that documentation is only a tool which may be used. The tool itself does nothing to improve the development process. What the tool does do is provide information which must be carefully analyzed and reviewed and it is in the thoughtful analysis that the benefits from documentation can

accrue. If people are striving to understand and learn about the development process, then the documentation can be invaluable. If, on the other hand, documentation is superficially reviewed or used for the wrong purposes, then, it ceases to become facilitative. It instead becomes bureaucratic and will inevitably hinder rather than assist the curriculum development effort.